

Web System and Technologies (Objective + Subjective)

1. What four components are needed to create a fully dynamic web page. A web server (such as Apache), a server-side scripting language (PHP), a database (MySQL), and a client-side scripting language (JavaScript) are used to create a dynamic web page.

2. List three major new elements introduced in html.

There are many new elements that are introduced in html like;

<header> Defines a header for a document or section

<main> Defines the main content of a document <footer> Defines a footer for a document or section. <section> Define a section in a document.

3. What is the difference between XAMPP ,WAMP , LAMP and MAMP ?

- Full form of LAMP is Linux, Apache, MySQL and PHP. Lamp is for Linux operating system
- Full form of WAMP is Windows, Apache, MySQL and PHP. Wamp is for windows operating system
- Mamp is for Mac OS X operating system
- xampp is for x-os, apache, mysql, php , perl.

4. Why is better to use a program editor instead of plain-text editor. Dedicated program editors are smart and can highlight problems in your code before you even run it.therefore we use program editor instead of plain text-editor.

5. What are the building block of web.

There are the some building blocks that make your website more attractive and give good look and feel. Some are given below:

- **Plan Your Website.**
- **Define your goals and objectives for the website**
- **Determine the look and feel of the website**
- **Brainstorm ideas for a website address**
- **Use an attractive, professional-looking design**
- **Promote Your Website**
- **Once you publish your website, invite feedback** ⓘ
Contact Information:

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6. Write down the name of server side technologies for web application. This is all possible through the server-side software and **middleware** your back-end developer writes, which create a tailored channel from site to database. There are number of technologies are used for web applications such as:

- PHP
- Python
- Ruby
- C#
- C++
- Java

7. What commands initiate and end a MySQL transaction.

A transaction ends when it is committed or rolled back, either explicitly with a COMMIT or ROLLBACK. Commit and Rollback commands are used to initiate and end MySQL transaction.

8. Which function is used to prevent XSS injection attacks?

9. What is the difference between text box and text area.

The difference between the two is that input text box will allow you to add one line of text, while the Text Area will allow you to add multiple lines of the text.

10. What is the difference between session hijacking and session fixation?

In a session fixation attack, the attacker already has access to a valid session and tries to force the victim to use this particular session. While in a session hijacking attack, the attacker tries to get the ID of a victim's session to use his/ her session.

11. What is JavaScript?

An object-oriented computer programming language commonly used to create interactive effects within web browsers.

12. Define Cookies? For which purpose it is used?

A **cookie** is a small amount of data generated by a website and saved by your web browser. Its **purpose** is to remember information about you, similar to a preference file created by a software application. **Cookies** are also **used** to store user preferences for a specific site.

13. How to display confirm box, prompt window and alert using JavaScript? The three "commands" involved in creating alert, confirm, and prompt boxes are:

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- window.alert()
- window.confirm()
- window.prompt()

14. What are the components of web services?

These are the some components of web services.

- SOAP (Simple Object Access Protocol) is an XML-based protocol for exchanging information between computers.
- UDDI (Universal Description, Discovery and Integration) UDDI is an XML-based standard for describing, publishing, and finding web services.
- WSDL (Web Services Description Language) WSDL is an XML-based language for describing web services and how to access them.

15. What is web content management system?

WCMS is a set of tools that provides an organization with a way to manage digital information on a website through creating and maintaining content without prior knowledge of web programming or markup languages.

16. Define HTML and XML stand for?

HTML is an abbreviation for HyperText Markup Language. **HTML** was designed to display data with focus on how data looks. **XML** was designed to be a software and hardware independent tool used to transport and store data. **XML** also provides a framework for defining markup languages.

17. Why does the name MySQL contain letter SQL?

Like nearly all database engines, MySQL accepts commands in Structured Query Language (SQL). SQL is the way that every user (including a PHP program) communicates with MySQL that's why MySQL contain the letter SQL.

18. What is the purpose of an FTP program?

As the name suggests, **FTP** is used to transfer files between computers on a network. You can use **FTP** to exchange files between computer accounts, transfer files between an account and a desktop computer, or access online software archives.

19. What is the difference between ++\$j and \$j++?

The difference is that ++\$j increments \$j before the test or other operation is performed, whereas \$j++ performs the operation and then increments \$j.

20. What are the purpose of function in php programming? A function is a block of statements that can be used repeatedly in a program. A function will not execute immediately when a page loads. A function will be executed by a call to the function.

21. Give one reason why using the POST method form is better than GET form?

22. What is difference between stateless and statefull protocol?

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In **stateless protocol** there is no record of the state is saved at server end. Client send request to the server and server response back according to current state. A stateless server does not keep state between connections. When you send a request to a stateless server, it does not create any objects that track information regarding your requests. ex.UDP, HTTP etc In **Statefull protocol** there is tight dependency between client and server. If client send a request to the server then it expects some kind of response, if it does not get any response then resend request.A stateful server keeps state of connections. ex.FTP , Talnet.

23.What is the purpose of introducing ccs?

Subjective Part

1. Explain HTTP request and response Methods?

What is HTTP?

The Hypertext Transfer Protocol (HTTP) is designed to enable communications between clients and servers.

HTTP works as a request-response protocol between a client and server.

A web browser may be the client, and an application on a computer that hosts a web site may be the server.

Example: A client (browser) submits an HTTP request to the server; then the server returns a response to the client. The response contains status information about the request and may also contain the requested content. **Two HTTP Request Methods: GET and POST**

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Two commonly used methods for a request-response between a client and server are: GET and POST.

- **GET** - Requests data from a specified resource
- **POST** - Submits data to be processed to a specified resource

The GET Method

Some other notes on GET requests:

- GET requests can be cached
- GET requests remain in the browser history
- GET requests can be bookmarked
- GET requests should never be used when dealing with sensitive data
- GET requests have length restrictions
- GET requests should be used only to retrieve data

The POST Method

Some other notes on POST requests:

- POST requests are never cached
- POST requests do not remain in the browser history
- POST requests cannot be bookmarked
- POST requests have no restrictions on data length

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HTTP Request Methods

HTTP Response Methods

Method	Description
Clear()	Clears all content output from the buffer stream.
ClearContent()	Clears all content output from the buffer stream
Flush()	Sends all currently buffered output to the client.
GetType()	Gets the Type of the current instance.(Inherited from Object.)
Redirect(String)	Redirects a request to a new URL and specifies the new URL.
OPTIONS	Returns the HTTP methods that the server supports
CONNECT	Converts the request connection to a transparent TCP/IP tunnel

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2. Explain the different types of styles in CSS ?

What is CSS ?

Cascading Style Sheets (CSS) is a **style sheet language** used for describing the **presentation** of a document written in a **markup language**. CSS is also designed primarily to enable the separation of presentation and content, including aspects such as the **layout**, **colors**, and **fonts**.

Types of Stylesheet

There are three types of stylesheets:

- **Internal** - Placed right on the page whose interface it will affect.
- **External** - Placed in a separate file.
- **Inline** - Placed inside a tag it will affect.

Creating an inline stylesheet

Use inline stylesheets when you want to apply a style to a single occurrence of an element.

Inline stylesheets are declared within individual tags and affect those tags only.

Inline stylesheets are declared with the *style* attribute. **Example:**

```
<p style="color:gray">This text will be gray.</p>
```

Creating an Internal stylesheet

Use an internal stylesheet when you want an HTML document to have a unique style. An internal stylesheet is defined using the `<style>` tag and goes in the head section of an HTML document.

The `<style>` tag specifies the content type of a stylesheet with its **type** attribute which should be set to "text/css".

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Syntax:

```
<style type="text/css"> styles go here </style>
```

Creating an external stylesheet

An external stylesheet is declared in an external file with a .css extension. It is called by pages whose interface it will affect. External stylesheets are called using the <link> tag which should be placed in the head section of an HTML document.

This tag takes three attributes.

Attributes of the <link> tag with external stylesheet:

- **rel** - When using an external stylesheet on a webpage, this attribute takes the value "stylesheet"
- **type** - When using an external stylesheet on a webpage, this attribute takes the value "text/css"
- **href** - Denotes the name and location of the external stylesheet to be used.

3. Briefly explain what is a new in HTML5?

In the new world of HTML 5 some things will remain the same, some will go away and many will be added. In this article we will take a look specifically at what's new with the global (sometimes called standard) attributes. Global attributes are those attributes that apply to all HTML elements.

New Semantic/Structural Elements

HTML5 offers new elements for better document structure:

Tag	Description
<article>	Defines an article in a document
<aside>	Defines content aside from the page content

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<bdi>	Isolates a part of text that might be formatted in a different direction from other text outside it
<details>	Defines additional details that the user can view or hide
<dialog>	Defines a dialog box or window
<figcaption>	Defines a caption for a <figure> element
<figure>	Defines self-contained content
<footer>	Defines a footer for a document or section
<header>	Defines a header for a document or section
<main>	Defines the main content of a document
<mark>	Defines marked/highlighted text
<menuitem>	Defines a command/menu item that the user can invoke from a popup menu
<meter>	Defines a scalar measurement within a known range (a gauge)
<nav>	Defines navigation links
<progress>	Represents the progress of a task
<rp>	Defines what to show in browsers that do not support ruby annotations
<rt>	Defines an explanation/pronunciation of characters (for East Asian typography)
<ruby>	Defines a ruby annotation (for East Asian typography)
<section>	Defines a section in a document
<summary>	Defines a visible heading for a <details> element
<time>	Defines a date/time
<wbr>	Defines a possible line-break

New Form Elements

Tag	Description
<datalist>	Specifies a list of pre-defined options for input controls

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<output>

Defines the result of a calculation

New Input Types

New Input Types

- color
- date
- datetime
- datetime-local
- email
- month
- number
- range
- search
- tel
- time
- url
- week

New Input Attributes

- autocomplete
- autofocus
- form
- formaction
- formenctype
- formmethod
- formnovalidate
- formtarget
- height and width
- list
- min and max
- multiple
- pattern (regexp)
- placeholder
- required
- step

New Media Elements

Tag

Description

<audio>

Defines sound content

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<code><embed></code>	Defines a container for an external (non-HTML) application
<code><source></code>	Defines multiple media resources for media elements (<code><video></code> and <code><audio></code>)
<code><track></code>	Defines text tracks for media elements (<code><video></code> and <code><audio></code>)
<code><video></code>	Defines video or movie

4. Write a code to display diamond shape by using JavaScript?

```
<!DOCTYPE html>
<html lang="en">
<head>
  <meta charset="UTF-8">
  <title>Diamond function</title>
</head>
<body>

<input type="button" value="Submit" onclick="diamond(10)">

<script type="text/javascript">

  function diamond(val){

    doubleit = val*2;    document.write('<center>');
    document.write('function diamond('+val+'<br>');    for(i=0;
i<doubleit; i++){      if (i < val){          for(j=0; j<i; j++){
document.write('*');
    }      }      if (i >=
val){          for(j=doubleit; j>i; j--
){          document.write('*');
    }
    }
    document.write('<br>');
  }
  document.write('</center>');
}

</script>
</body>
</html>
```


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Step #3 Calculate Relevancy – Use search algorithm to sort and filter results Step #4
Display Results -Display results as per search query

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